

FIG. 4 is a schematic drawing illustrating the experimental design for DNA isolation using an electrophoretic medium.

FIG. 5 shows the effects of varying the elution voltage.

FIG. 6 shows results obtained from subjecting extension sequencing products to electrophoresis in which the electrophoretic medium contained immobilized capture probes; FIG. 6a shows the results of the experiment after running the gel for thirty minutes; FIG. 6b shows the results of the experiment after sixty minutes.

Please amend the third full paragraph on page 17 as follows:

To characterize the eluted products, samples of purified and crude sequencing products were subjected to electrophoresis in a polyacrylamide gel containing a discrete layer of gel immobilized capture probe arranged as a horizontal band across the width of the gel (see "Capture layer" in FIG. 6). The gel was composed of 5% polyacrylamide (29:1 monomer:bis wt/wt), 1 x TBE. The capture layer contained the same polyacrylamide and buffer with 10  $\mu$ M of the 5'-acrylamide capture probe (5'-acrylamide-GGG ATC CTC TAG AGT CGA CCT 3' [SEQ ID No. 2]). The samples were subjected to electrophoresis run at 150 Volts for 30 minutes (FIG. 6a) and 60 minutes (FIG. 6b). Lane 1 contains 15  $\mu$ L of the sample that had been purified by electrophoretic capture and elution, and lane 2 contains 5  $\mu$ L of the unpurified sequence product. Figure 6a shows that the hybridization-purified product (lane 1) has been purified away from the excess primers, which are seen in the unpurified sample at the bottom of lane 2.

#### REMARKS

Following entry of the amendments, claims 1-20 are pending in this application.

#### CONCLUSION

Applicants respectfully submit that the claims are allowable. If the Examiner believes that a conversation with Applicants' agent would be helpful in expediting prosecution of this application, the Examiner is invited to call the undersigned at the telephone number below.

Applicants believe that no fees are due with this submission. However, the Director is hereby authorized to charge any fees that may be due to deposit account No. 20-0531.